

EXHIBIT B

Thomas J. Ashton

MATTHEW S. JOHNSON

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Analysis of Economic Loss in the Matter of
Estate of Thomas J. Ashton

September 2016

To Whom It May Concern,

I have been retained by Kreindler & Kreindler LLP to provide an estimate of the economic losses to the estate of Thomas J. Ashton following his death in the terrorist attacks of September 11, 2001. The attached report provides the details of my analysis.

I have attached my Curriculum Vitae that describes my qualifications to undertake this report.

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1. Introduction

Thomas J. Ashton was born on December 6, 1979, and he was 21 years old when he was killed in the terrorist attacks of September 11, 2001. He was survived by a large and close-knit family.

This report provides the details behind an estimate of the economic loss to the estate of Mr. Ashton as a result of his death.

2. Retirement and Life Expectancy

I have assumed Mr. Ashton would work until the age of 65, and that he would live until age 76, the average life expectancy of a white male aged 21 as of 2002.¹

3. Earnings Loss

At the time of his death, Thomas Ashton was beginning a new career as an electrician in the International Brotherhood of Electrical Workers (IBEW) Local 3 Union. After completing a four-year apprenticeship, which he had begun only two months prior to his death, Mr. Ashton's career as an IBEW member would have rewarded him with both a well-paying salary and generous benefits. Given his traits of intelligence, tenacity and persistence described in the report I have received prepared by James P. Kreindler, Esq, I have assumed that Mr. Ashton would have continued with this career until his retirement.

My estimate of Mr. Ashton's lost earnings is based on the May 11, 2001 agreement ("IBEW Agreement") between the New York Electrical Contractors and Local Union No: 3 IBEW. After completing his four-year apprenticeship, Mr. Ashton would have become an "A" Journeyman, and following a few more years of experience would have become an "M" Journeyman. I did not see in the materials I was given, nor through the Internet, how many years it would likely take for Mr. Ashton to go from "A" to "M" Journeyman, so I have assumed it would take four years.

The hourly wages and hours worked per week for the apprenticeship and Journeyman positions, as of 2001, were provided in the IBEW Agreement, and I have assumed Mr. Ashton's wage as a "M" Journeyman would have increased by 3 percent each year after beginning that role.

4. Retirement Benefits

¹ National Vital Statistics Reports. United States Life Tables, 2002. Volume 53, No. 6, November 10, 2004.

As a IBEW member, Mr. Ashton would have received substantial benefits in retirement, both through an annuity and pension plan.

Through the annuity plan, Mr. Ashton would have received a fixed monthly stream upon retirement, with the amount determined by the total contributed at time of retirement. As of 2001, Mr. Ashton's employer would have contributed between 30 cents (as an apprentice) and 1 dollar (as an "A" Journeyman) per hour worked, but as of 2010 the contribution for "A" Journeymen had increased to \$2.50.² Given that this contribution more than doubled over a 12-year period, I have assumed this contribution would again double in the year 2030 to \$5. Given this estimated contribution path, I estimate the total contributions to Mr. Ashton's annuity account at retirement age would be \$241,920 (Table 3), ensuring would be entitled to annual payments of roughly \$22,000 until his estimated death at age 76.

Mr. Ashton would also have received a pension in retirement. I could not find information about the pension benefit he could expect to receive in the IBER agreement, but I found a description of the plan from 2013.³ The monthly pension benefit was \$80 multiplied by the number of credits the retiree had accumulated. The maximum credits a retiree could earn was 40 as of 2011, so I assume Mr. Ashton would have accumulated 40 credits given his long expected tenure in this profession.

Finally, Mr. Ashton would have received Social Security payments in retirement. I assume he would have received a monthly payment of \$1,341, which is the average monthly benefit among retired workers in 2016.⁴

5. Income Taxes and other deductions from pre-tax earnings

A portion of Mr. Ashton's earnings would have been taken out for his union dues. I have estimated the portion that would be taken out of his annual earnings based on the IBEW agreement.

Additionally, a portion of Mr. Ashton's earnings would have been taxed at the federal and state level, and for FICA. To estimate Mr. Ashton's tax liability, I use the TaxSim program, administered by the National Bureau of Economic Research (NBER).⁵

6. Personal Consumption

² See the report dated May 9, 2013, http://www.jibei.org/SPD's/Annuity_SPD_2013.pdf (accessed 9/4/2016)

³ See http://jibei.org/SPD's/Pension_Trust_SPD_2013.pdf

⁴ Source: Investopedia. <http://www.investopedia.com/ask/answers/102814/what-maximum-i-can-receive-my-social-security-retirement-benefit.asp>

⁵ TaxSim takes as inputs taxable income, marital status, age, dependents, among others, and outputs federal, state, and FICA tax liabilities. For simplicity I assume the filer filed as "Single." I assume Mr. Ashton would have lived in a 2-person household (with his then girlfriend Jackie) through age 25, a 3-person household through age 30, a 4-person household through age 50, and finally a 2-person household thereafter.

Mr. Ashton would have used a portion of his earnings and benefits for personal consumption. To estimate the portion of Mr. Ashton's income that would have gone to personal consumption, I use the Patton-Nelson tables, a widely referenced source to estimate the necessary consumption allowance to determine the portion of post-tax income that is to be included as a loss to the estimate.⁶

The Patton-Nelson method estimates the percent of income allocated to consumption by income, gender, and household size. I make the same assumptions regarding Mr. Ashton's household size as in estimating his tax liability.

7. Lost Value of Household Services

Mr. Ashton was an incredibly devoted son and partner, and one way he embodied this characteristic was through providing help around the house, including working on household projects together with his father. To estimate the value of these lost services, I have use the "Replacement Rate" method to estimate what his family would have to pay to hire someone to provide these services. I assume Mr. Ashton would have spent 8 hours per week providing such services, which is line with descriptions in the reports I have received, and that his family would have to pay someone \$15/hour to provide them in his place.

8. Discount Rates

An estimate of the present value of the loss to Mr. Ashton's estate must discount future income streams at an appropriate rate. As such, I have discounted all income beyond 2016 at an annual rate of 2 percent.

⁶ Ruble, M.R., Patton, R.T. and Nelson, D.M., 2014. Patton-Nelson Personal Consumption Tables 2011-12. *J. Legal Econ.*, 21, p.41.

Table 1: Summary of Economic Damages to the Estate of Thomas Ashton

Present Value of Lost Earnings	1,352,123
Present Value of Lost Retirement Benefits	271,576
Present Value of Lost Household Services	252,350
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Total	1,876,048

Table 2: Present Value of Lost Earnings

Year	Age	Hourly Wage	Hours (35 hours/week*52 weeks)	Pre-tax earnings	Taken out for IBEW benefits	Taxable Income	Taxes	Take Home Pay	Consumption	Net Loss	Present Value	Discount
2002	21	11.25	1,820	20,475	6,276	14,199	3,068	11,131	4,853	6,278	6,278	0
2003	22	14.30	1,820	26,026	7,977	18,049	4,338	13,711	5,978	7,733	7,733	0
2004	23	17.15	1,820	31,213	9,567	21,646	5,593	16,053	6,999	9,054	9,054	0
2005	24	19.60	1,820	35,672	10,933	24,739	6,671	18,068	7,878	10,190	10,190	0
2006	25	20.60	1,820	37,492	11,491	26,001	5,177	20,823	5,352	15,472	15,472	0
2007	26	20.60	1,820	37,492	11,491	26,001	4,885	21,115	5,427	15,689	15,689	0
2008	27	20.60	1,820	37,492	11,491	26,001	4,674	21,326	5,481	15,845	15,845	0
2009	28	20.60	1,820	37,492	11,491	26,001	3,871	22,130	5,687	16,443	16,443	0
2010	29	20.60	1,820	37,492	11,491	26,001	3,852	22,149	5,692	16,457	16,457	0
2011	30	41.00	1,820	74,620	22,871	51,749	15,110	36,639	8,170	28,468	28,468	0
2012	31	42.23	1,820	76,859	23,557	53,301	14,415	38,886	7,427	31,459	31,459	0
2013	32	43.50	1,820	79,164	24,264	54,900	15,993	38,908	7,431	31,476	31,476	0
2014	33	44.80	1,820	81,539	24,992	56,547	16,619	39,929	7,626	32,302	32,302	0
2015	34	46.15	1,820	83,985	25,742	58,244	17,412	40,832	6,982	33,850	33,850	0
2016	35	47.53	1,820	86,505	26,514	59,991	18,229	41,763	7,141	34,621	33,942	1
2017	36	48.96	1,820	89,100	27,309	61,791	19,070	42,721	7,305	35,416	34,040	2
2018	37	50.42	1,820	91,773	28,128	63,645	19,937	43,708	7,474	36,234	34,144	3
2019	38	51.94	1,820	94,526	28,972	65,554	20,829	44,725	7,648	37,077	34,253	4
2020	39	53.50	1,820	97,362	29,842	67,521	21,749	45,772	7,827	37,945	34,368	5
2021	40	55.10	1,820	100,283	30,737	69,546	22,696	46,851	8,011	38,839	34,488	6
2022	41	56.75	1,820	103,292	31,659	71,633	23,671	47,962	8,201	39,760	34,614	7
2023	42	58.46	1,820	106,390	32,609	73,782	24,676	49,106	8,397	40,709	34,745	8
2024	43	60.21	1,820	109,582	33,587	75,995	25,910	50,085	7,863	42,221	35,329	9
2025	44	62.02	1,820	112,869	34,594	78,275	26,976	51,299	8,054	43,245	35,476	10
2026	45	63.88	1,820	116,256	35,632	80,623	28,074	52,549	8,250	44,299	35,628	11
2027	46	65.79	1,820	119,743	36,701	83,042	29,205	53,837	8,452	45,385	35,785	12
2028	47	67.77	1,820	123,335	37,802	85,533	30,370	55,164	8,661	46,503	35,948	13
2029	48	69.80	1,820	127,036	38,936	88,099	31,570	56,529	8,875	47,654	36,116	14
2030	49	71.89	1,820	130,847	40,104	90,742	32,811	57,931	9,095	48,836	36,286	15
2031	50	74.05	1,820	134,772	41,308	93,464	34,089	59,375	9,322	50,053	36,461	16
2032	51	76.27	1,820	138,815	42,547	96,268	37,513	58,755	14,160	44,595	31,848	17
2033	52	78.56	1,820	142,980	43,823	99,156	38,869	60,287	13,384	46,903	32,840	18

2034	2034	53	80.92	1,820	147,269	45,138	102,131	40,345	61,786	13,717	48,070	32,996	19
2035	2035	54	83.34	1,820	151,687	46,492	105,195	42,282	62,913	13,967	48,946	32,939	20
2036	2036	55	85.84	1,820	156,238	47,887	108,351	43,800	64,551	14,330	50,220	33,134	21
2037	2037	56	88.42	1,820	160,925	49,323	111,601	45,363	66,238	14,705	51,533	33,334	22
2038	2038	57	91.07	1,820	165,753	50,803	114,949	46,973	67,976	15,091	52,886	33,538	23
2039	2039	58	93.81	1,820	170,725	52,327	118,398	48,458	69,940	15,527	54,413	33,830	24
2040	2040	59	96.62	1,820	175,847	53,897	121,950	49,726	72,224	14,950	57,274	34,910	25
2041	2041	60	99.52	1,820	181,122	55,514	125,608	51,031	74,577	15,437	59,140	35,341	26
2042	2042	61	102.50	1,820	186,556	57,179	129,377	52,376	77,000	15,939	61,061	35,773	27
2043	2043	62	105.58	1,820	192,153	58,895	133,258	53,761	79,496	16,456	63,041	36,209	28
2044	2044	63	108.75	1,820	197,917	60,662	137,256	55,188	82,067	15,921	66,146	37,248	29
2045	2045	64	112.01	1,820	203,855	62,481	141,373	56,657	84,716	16,435	68,281	37,696	30
2046	2046	65	115.37	1,820	209,970	64,356	145,614	58,171	87,443	16,964	70,479	38,147	31
Total													1,352,123

**Table 3: Annual Employer
Contribution to Annuity Plan**

year	Age	Contributions
2002	21	546
2003	22	546
2004	23	546
2005	24	546
2006	25	546
2007	26	647.5
2008	27	647.5
2009	28	647.5
2010	29	647.5
2011	30	4550
2012	31	4550
2013	32	4550
2014	33	4550
2015	34	4550
2016	35	4550
2017	36	4550
2018	37	4550
2019	38	4550
2020	39	4550
2021	40	4550
2022	41	4550
2023	42	4550
2024	43	4550
2025	44	4550
2026	45	4550
2027	46	4550
2028	47	4550
2029	48	4550
2030	49	4550
2031	50	9100
2032	51	9100
2033	52	9100
2034	53	9100
2035	54	9100
2036	55	9100
2037	56	9100
2038	57	9100
2039	58	9100
2040	59	9100
2041	60	9100
2042	61	9100
2043	62	9100
2044	63	9100
2045	64	9100
2046	65	9100
Total at retirement		241920

Table 4: Present Value of Lost Retirement Benefits

Year	Age	Annuity Benefit	Pension Benefit	Social Security	Taxes	Post tax retirement earnings	Consumption	Net Loss	Present Value	Discount
2047	66	26400	38400	16092	16285.9	64606.1	14342.6	50263.5	27205	31
2048	67	26400	38400	16092	16285.9	64606.1	14342.6	50263.5	26672	32
2049	68	26400	38400	16092	16285.9	64606.1	14342.6	50263.5	26149	33
2050	69	26400	38400	16092	16285.9	64606.1	14342.6	50263.5	25636	34
2051	70	26400	38400	16092	16285.9	64606.1	14342.6	50263.5	25133	35
2052	71	26400	38400	16092	16285.9	64606.1	14342.6	50263.5	24640	36
2053	72	26400	38400	16092	16285.9	64606.1	14342.6	50263.5	24157	37
2054	73	26400	38400	16092	16285.9	64606.1	14342.6	50263.5	23684	38
2055	74	26400	38400	16092	16285.9	64606.1	14342.6	50263.5	23219	39
2056	75	26400	38400	16092	16285.9	64606.1	14342.6	50263.5	22764	40
2057	76	26400	38400	16092	16285.9	64606.1	14342.6	50263.5	22318	41
Total									271576	

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Citizenship: USA

EMPLOYMENT

Postdoctoral Scholar, Sanford School of Public Policy, Duke University, starting July 2016

EDUCATION

Ph.D., Economics, Boston University, Boston, MA, May 2016 (expected)

Dissertation Title: *Essays on Nonwage Compensation*

Dissertation Committee: Johannes Schmieder, Kevin Lang, David I. Levine

Visiting Ph.D. student, Harris School of Public Policy, University of Chicago, Chicago, IL, 2014-2015

B.A., Economics and History (*with Honors*), University of California, Berkeley, Berkeley, CA, 2007

RESEARCH FIELDS

Labor Economics, Public Economics, Organizational Economics

RESEARCH GRANTS

2014-2015: The Effects of OSHA Enforcement: An Analysis of a Very Large Sample of Randomized Inspections." Coalition for Evidence-Based Policy Low-Cost RCT Grant, \$100,000 (Co-PI with David I. Levine and Michael W. Toffel)

FELLOWSHIPS AND AWARDS

2015-2016: Pre-Doctoral Fellowship in Disability Policy, National Bureau of Economic Research

2014: Outstanding Paper Award, Alliance for Research on Corporate Sustainability (ARCS) Annual Conference

2014-2015: Funding for Research Assistant, RA Mentor Program, Boston University Department of Economics

2012: National Science Foundation Graduate Research Fellowship, Honorable Mention

2011-2016: Dean's Fellowship, Boston University

2007: Distinction in General Scholarship, UC Berkeley

TEACHING EXPERIENCE

2012-2013: Teaching Fellow, Principles of Microeconomics, Department of Economics, Boston University

RESEARCH EXPERIENCE

2013-2014: Research Assistant for Professors Carola Frydman, Claudia Olivetti and Daniele Paserman, Boston University

2009-2011: Research Assistant for Professors Laura Alfaro, Fritz Foley, and Michael Toffel, Harvard Business School

2007-2009: Senior Research Assistant for Dr. Martin Baily, The Brookings Institution

PUBLICATIONS

- Levine, David I., Michael W. Toffel, and Matthew S. Johnson. 2012. "Randomized Government Safety Inspections Reduce Worker Injuries with No Detectable Job Loss." *Science* 336, no. 6083.
- Baily, Martin N., Robert E. Litan and Matthew S. Johnson. 2008. "The Origins of the Financial Crisis." The Brookings Institution; Fixing Finance Series: Paper 3.
- Johnson, Matthew S. 2007. "The Power of Ideas and American Racial Struggles in the Early Nineteenth Century." *Clio's Scroll: Berkeley Undergraduate History Journal* (spring).

WORKING PAPERS

- "Regulation by Shaming: Deterrence Effects of Publicizing Violations of Workplace Safety Laws."

OTHER PUBLICATIONS

Harvard Business School (HBS) Teaching Materials

- Foley, C. Fritz, Matthew S. Johnson. "The Export-Import Bank of the United States." HBS Case 211-032.
- Foley, C. Fritz and Matthew S. Johnson. "Belco Global Foods." HBS Case 211-033.
- Alfaro, Laura, and Matthew Johnson. "Foreign Direct Investment and Ireland's Tiger Economy (B)." HBS Supplement 710-057.
- Foley, C. Fritz, Michael Chen, Matthew Johnson, Linnea Meyer. "Noble Group." HBS Case 210-021.

Book Chapters

- Alfaro, Laura and Matthew Johnson. 2012. "Foreign Direct Investment and Growth." Chap. 20 in *The Evidence and Impact of Financial Globalization*, edited by Gerard Caprio, 299–307. Elsevier.

CONFERENCES AND PRESENTATIONS

- 2016: Strategy and the Business Environment Annual Conference
- 2015: Southern Economic Association Annual Meeting
- 2014: Society of Labor Economists (SOLE) Annual Meeting; Alliance for Research in Corporate Sustainability (ARCS) Annual Meeting; Washington University Economics Graduate Student Conference; White House Office of Science and Technology Policy
- 2013: Harvard School of Public Health ERC Seminar
- 2012: Association for Public Policy and Management Fall Research Conference, Baltimore MD

COMPUTER SKILLS: STATA, LaTeX, R

OTHER EXPERIENCE

- 2014-2015: BU Labor Reading Group founder/organizer; 2013-2014: BU Graduate Economics Association Officer; 2012-2015: Volunteer Tutor with Tutoring Plus! (2012-2015)

Michael S. Baksh

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Analysis of Economic Loss in the Matter of
Estate of Michael S. Baksh

September 2016

To Whom It May Concern,

I have been retained by Kreindler & Kreindler LLP to provide an estimate of the economic losses to the estate of Michael S. Baksh following his death in the terrorist attacks of September 11, 2001. The attached report provides the details of my analysis.

I have attached my Curriculum Vitae that describes my qualifications to undertake this report.

Matthew S. Johnson

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1. Introduction

Michael S. Baksh was born on May 18, 1965, and he was 36 years old when he was killed in the terrorist attacks of September 11, 2001. He was survived by his wife and two children.

This report provides the details behind an estimate of the economic loss to the estate of Mr. Baksh as a result of his death.

2. Retirement and Life Expectancy

I have assumed Mr. Baksh would work until the age of 65, and that he would live until age 77, the average life expectancy of a male aged 36 as of 2002.¹

3. Earnings Loss

At the time of his death, Michael Baksh was beginning a new career with Marsh Private Client Services, having begun a new position at the company a mere day prior to his death. This position offered both financial security and steady hours, both of which were important for Mr. Baksh, who based on the documents I have received was a devoted husband and father. Furthermore, based on his background, Mr. Baksh appeared eminently qualified for the position. Therefore, I have assumed that Mr. Baksh would have continued at Marsh until his retirement.

My estimate of Mr. Baksh's lost earnings is based on the report I have received written by Noah H. Kushlefsky of Kreindler & Kreindler LLP. Mr. Baksh's starting salary was \$100,000. I assume Mr. Baksh's salary would have increased each year by 3.32% from then on, which was the Compound Annual Growth Rate (CAGR) in total compensation for workers in "Financial Services" between 2004 and 2016.² In addition to salary, Marsh would have paid an annual bonus between 10-65 percent of salary, so I have assumed he would receive a bonus of 37.5 percent of his salary each year.

4. Retirement Benefits

¹ National Vital Statistics Reports. United States Life Tables, 2002. Volume 53, No. 6, November 10, 2004.

² Bureau of Labor Statistics, Employer Cost for Employee Compensation Historical Listing, National Compensation Survey, March 2004-June 2016. <http://www.bls.gov/ncs/ect/#tables> (accessed 9/25/2016).

Mr. Baksh could have expected to receive generous retirement benefits through his position at Marsh as well. He would have received a traditional pension, which would have paid him annually an amount roughly between 40 and 45% of average salary for the five years prior to retirement. Thus, I have assumed he would receive a pension equal to 42.5% of his estimated average salary over this period.

Additionally, Marsh offered other retirement benefits which the report I have received suggests he would have taken full advantage of. I assume he would have paid 15% of his pre-tax salary into Marsh's Stock Investment Plan (a 401(k) type plan) and, based on Marsh's policy, would have received matching contributions of 4.29% of his salary up to age 55, and 6% of his salary from then on. I assume this 401(k) would have achieved an annual rate of return of 4 percent, which is in line with predictions of many financial experts as of 2014.³ I assume Mr. Baksh would have drawn down these savings each year in retirement so that he exhausted it in the year of his death.⁴

Finally, Mr. Baksh would have received Social Security payments in retirement. I assume he would have received a monthly payment of \$1,341, which is the average monthly benefit among retired workers in 2016.⁵

5. Income Taxes

A portion of Mr. Baksh's earnings would have been taxed at the federal and state level, and for FICA. To estimate this tax liability each year, I use the TaxSim program, administered by the National Bureau of Economic Research (NBER).⁶

6. Personal Consumption

Mr. Baksh would have used a portion of his earnings and benefits for personal consumption, and the monetary loss to his estate must be adjusted to account for this consumption. To estimate the portion of Mr. Baksh income that would have gone to personal consumption, I use the Patton-Nelson tables, a widely referenced source to estimate the necessary consumption allowance to determine the portion of post-tax income that is to be included as a loss to the estate of the deceased.⁷ The Patton-Nelson method estimates the percent of income allocated to consumption by income, gender, and household size.

³ Ruth Davis Konigsberg, 2014. "Why Your 401(k) May Only Return 4%." Time.com <http://time.com/money/3247321/retirement-401k-no-more-10-returns/> (accessed 9/5/2016)

⁴ Specifically, each year I assume he would withdraw a percentage of his remaining balance equal to the one divided by the number of years remaining in his life plus 1. Thus, at age 66, he withdraws $1/(77-66+1)=8.3\%$.

⁵ Source: Investopedia. <http://www.investopedia.com/ask/answers/102814/what-maximum-i-can-receive-my-social-security-retirement-benefit.asp>

⁶ TaxSim takes as inputs taxable income, marital status, age, dependents, among others, and outputs federal, state, and FICA tax liabilities. For simplicity I assume the filer filed as "Single." I assume tax rates in years after 2013 are remain at what they were in 2013 (the last year in the TaxSim database).

⁷ Ruble, M.R., Patton, R.T. and Nelson, D.M., 2014. Patton-Nelson Personal Consumption Tables 2011-12. *J. Legal Econ.*, 21, p.41.

Additionally, a portion of Mr. Baksh's earnings would have gone toward health insurance premiums. I have estimated the amount Mr. Baksh would have paid to such premiums based on a 2012 report of health insurance premiums by state from 2003 to 2011.⁸

7. Lost Value of Household Services

Mr. Baksh was a devoted husband and father, equally sharing in household duties and child rearing with his wife Christina, who estimated that Mr. Baksh provided an average of 20-25 hours of service per week.

To estimate the value of these lost services, I have use the "Replacement Rate" method to estimate what his family would have to pay to hire someone to provide these services. I assume Mr. Baksh would have provided 20 hours per week of these services through retirement, and 10 hours per week thereafter, and that his family would have to pay someone \$15/hour to provide them in his place.

8. Loss of Nurture to Mr. Baksh's children

Another loss of Mr. Baksh's death is the nurture, and emotional and psychological development, he would have provided to his children, Ava and James, age 7 and 2 at the time of his death, respectively. Mr. Baksh always made sure to spend time with his children in the evenings, and was evidently wholly devoted to his family, suggesting he would have provided such nurture had he not been killed. I apply the "Replacement Nurture Model"⁹ to estimate how much would need to be paid to hire someone to provide the nurturing services Mr. Baksh would have provided to his children, such as "Psychological / Emotional Development," "Scholastic Education," etc. This model estimates the number of hours Mr. Baksh would provide these services per day based on the American Time Use Survey (ATUS).

9. Discount Rates

An estimate of the present value of the loss to Mr. Baksh's estate must discount future income streams at an appropriate rate. As such, I have discounted all income beyond 2016 at an annual rate of 2 percent.

⁸ The Commonwealth Fund. 2012. State Trends in Premiums and Deductibles, 2003-2011: Eroding Protection and Rising Costs Underscore Need for Action. http://www.commonwealthfund.org/~media/files/publications/issue-brief/2012/dec/premiums/1648_schoen_state_trends_premiums_deductibles_2003_2011_1210.pdf (accessed September 2016).

⁹ Laurila, A., 2013. Valuing Mom & Dad: Calculating Loss of Parental Nurture in a Wrongful Death Action. *U. La Verne L. Rev.*, 35, p.39.

Table 1: Summary of Economic Damages to the Estate Of Michael Baksh

Present Value of Lost Earnings	2,819,528
Present Value of Lost Retirement Benefits	1,242,356
Present Value of Lost Nurture to Children	480,736
Present Value of Lost Household Services	392,898
Total	4,935,519

Table 3: Value of Contributions to Marsh Stock Investment Plan (including matching contributions from employer)

year	Age	Value of SIP holdings
2002	37	20062
2003	38	41592
2004	39	64671
2005	40	89385
2006	41	115822
2007	42	144075
2008	43	174243
2009	44	206427
2010	45	240736
2011	46	277283
2012	47	316184
2013	48	357566
2014	49	401556
2015	50	448292
2016	51	497915
2017	52	550576
2018	53	606430
2019	54	665641
2020	55	728382
2021	56	798139
2022	57	872034
2023	58	950279
2024	59	1033094
2025	60	1120708
2026	61	1213364
2027	62	1311314
2028	63	1414823
2029	64	1524167
2030	65	1639636

Table 4: Present Value of Lost Retirement Benefits

[illegible]

Table 5: Value of lost nurture provided to children

Year	Son's Age	Daughter's age	Hours/day, son	Hours/day, daughter	Hourly wage for provider of nurture	Value	Present Value	Discount
2002	3	8	1.32	0.52	74	49,975.93	49976	0
2003	4	9	1.32	0.52	74	49,975.93	49976	0
2004	5	10	1.32	0.52	74	49,975.93	49976	0
2005	6	11	1.32	0.52	74	49,975.93	49976	0
2006	7	12	0.52	0.52	74	28,247.27	28247	0
2007	8	13	0.52	0.52	74	28,247.27	28247	0
2008	9	14	0.52	0.52	74	28,247.27	28247	0
2009	10	15	0.52	0.52	74	28,247.27	28247	0
2010	11	16	0.52	0.52	74	28,247.27	28247	0
2011	12	17	0.52	0.52	74	28,247.27	28247	0
2012	13	18	0.52	0.52	74	28,247.27	28247	0
2013	14		0.52		74	14,123.63	14124	0
2014	15		0.52		74	14,123.63	14124	0
2015	16		0.52		74	14,123.63	14124	0
2016	17		0.52		74	14,123.63	13847	1
2017	18		0.52		74	14,123.63	13575	2
2018	18		0.52		74	14,123.63	13309	3
Total							480736	

Table 6: Estimated Value of Lost Household Services

Year	Age	Hours	Value	Present Value	Discount
2002	37	1040	15,600.00	15600	0
2003	38	1040	15,600.00	15600	0
2004	39	1040	15,600.00	15600	0
2005	40	1040	15,600.00	15600	0
2006	41	1040	15,600.00	15600	0
2007	42	1040	15,600.00	15600	0
2008	43	1040	15,600.00	15600	0
2009	44	1040	15,600.00	15600	0
2010	45	1040	15,600.00	15600	0
2011	46	1040	15,600.00	15600	0
2012	47	1040	15,600.00	15600	0
2013	48	1040	15,600.00	15600	0
2014	49	1040	15,600.00	15600	0
2015	50	1040	15,600.00	15600	0
2016	51	1040	15,600.00	15294	1
2017	52	1040	15,600.00	14994	2
2018	53	1040	15,600.00	14700	3
2019	54	1040	15,600.00	14412	4
2020	55	1040	15,600.00	14129	5
2021	56	520	7,800.00	6926	6
2022	57	520	7,800.00	6790	7
2023	58	520	7,800.00	6657	8
2024	59	520	7,800.00	6527	9
2025	60	520	7,800.00	6399	10
2026	61	520	7,800.00	6273	11
2027	62	520	7,800.00	6150	12
2028	63	520	7,800.00	6030	13
2029	64	520	7,800.00	5911	14
2030	65	520	7,800.00	5796	15
2031	66	520	7,800.00	5682	16
2032	67	520	7,800.00	5570	17
2033	68	520	7,800.00	5461	18
2034	69	520	7,800.00	5354	19
2035	70	520	7,800.00	5249	20
2036	71	520	7,800.00	5146	21
2037	72	520	7,800.00	5045	22
Total				392898	

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EMPLOYMENT

Postdoctoral Scholar, Sanford School of Public Policy, Duke University, starting July 2016

EDUCATION

Ph.D., Economics, Boston University, Boston, MA, May 2016 (expected)

Dissertation Title: *Essays on Nonwage Compensation*

Dissertation Committee: Johannes Schmieder, Kevin Lang, David I. Levine

Visiting Ph.D. student, Harris School of Public Policy, University of Chicago, Chicago, IL, 2014-2015

B.A., Economics and History (*with Honors*), University of California, Berkeley, Berkeley, CA, 2007

RESEARCH FIELDS

Labor Economics, Public Economics, Organizational Economics

RESEARCH GRANTS

2014-2015: The Effects of OSHA Enforcement: An Analysis of a Very Large Sample of Randomized Inspections." Coalition for Evidence-Based Policy Low-Cost RCT Grant, \$100,000 (Co-PI with David I. Levine and Michael W. Toffel)

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2015-2016: Pre-Doctoral Fellowship in Disability Policy, National Bureau of Economic Research

2014: Outstanding Paper Award, Alliance for Research on Corporate Sustainability (ARCS) Annual Conference

2014-2015: Funding for Research Assistant, RA Mentor Program, Boston University Department of Economics

2012: National Science Foundation Graduate Research Fellowship, Honorable Mention

2011-2016: Dean's Fellowship, Boston University

2007: Distinction in General Scholarship, UC Berkeley

TEACHING EXPERIENCE

2012-2013: Teaching Fellow, Principles of Microeconomics, Department of Economics, Boston University

RESEARCH EXPERIENCE

2013-2014: Research Assistant for Professors Carola Frydman, Claudia Olivetti and Daniele Paserman, Boston University

2009-2011: Research Assistant for Professors Laura Alfaro, Fritz Foley, and Michael Toffel, Harvard Business School

2007-2009: Senior Research Assistant for Dr. Martin Baily,
The Brookings Institution

PUBLICATIONS

- Levine, David I., Michael W. Toffel, and Matthew S. Johnson. 2012. "Randomized Government Safety Inspections Reduce Worker Injuries with No Detectable Job Loss." *Science* 336, no. 6083.
- Baily, Martin N., Robert E. Litan and Matthew S. Johnson. 2008. "The Origins of the Financial Crisis." The Brookings Institution; Fixing Finance Series: Paper 3.
- Johnson, Matthew S. 2007. "The Power of Ideas and American Racial Struggles in the Early Nineteenth Century." *Clio's Scroll: Berkeley Undergraduate History Journal* (spring).

WORKING PAPERS

"Regulation by Shaming: Deterrence Effects of Publicizing Violations of Workplace Safety Laws."

OTHER PUBLICATIONS

Harvard Business School (HBS) Teaching Materials

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- Alfaro, Laura, and Matthew Johnson. "Foreign Direct Investment and Ireland's Tiger Economy (B)." HBS Supplement 710-057.
- Foley, C. Fritz, Michael Chen, Matthew Johnson, Linnea Meyer. "Noble Group." HBS Case 210-021.

Book Chapters

- Alfaro, Laura and Matthew Johnson. 2012. "Foreign Direct Investment and Growth." Chap. 20 in *The Evidence and Impact of Financial Globalization*, edited by Gerard Caprio, 299–307. Elsevier.

CONFERENCES AND PRESENTATIONS

- 2016: Strategy and the Business Environment Annual Conference
- 2015: Southern Economic Association Annual Meeting
- 2014: Society of Labor Economists (SOLE) Annual Meeting; Alliance for Research in Corporate Sustainability (ARCS) Annual Meeting; Washington University Economics Graduate Student Conference; White House Office of Science and Technology Policy
- 2013: Harvard School of Public Health ERC Seminar
- 2012: Association for Public Policy and Management Fall Research Conference, Baltimore MD

COMPUTER SKILLS: STATA, LaTeX, R

OTHER EXPERIENCE

- 2014-2015: BU Labor Reading Group founder/organizer; 2013-2014: BU Graduate Economics Association Officer; 2012-2015: Volunteer Tutor with Tutoring Plus! (2012-2015)

Christine Barbuto

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Analysis of Economic Loss in the Matter of
Estate of Christine Barbuto

September 2016

To Whom It May Concern,

I have been retained by Kreindler & Kreindler LLP to provide an estimate of the economic losses to the estate of Christine Barbuto following her death in the terrorist attacks of September 11, 2001. The attached report provides the details of my analysis.

I have attached my Curriculum Vitae that describes my qualifications to undertake this report.

Matthew S. Johnson

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1. Introduction

Christine Barbuto was born on October 28, 1968, and she was 32 years old when she was killed in the terrorist attacks of September 11, 2001. She was survived by her sisters Diane Walsh and Jeanine Daly.

This report provides the details behind an estimate of the economic loss to the estate of Ms. Barbuto as a result of her death.

2. Retirement and Life Expectancy

I have assumed Ms. Barbuto would work until age 65, the normal social security retirement age, and that she would live until age 81, the average life expectancy for a Caucasian woman aged 32 as of 2002.¹

3. Earnings Loss

Ms. Barbuto was engaging in a very successful career. At the time of her death, she was a Women's Sportswear Buyer for TJX Companies, Inc. During her five years with the company she had risen rapidly, already having been promoted five times, and her current position as Buyer provided the greatest opportunity for upward advancement in the company and future financial rewards. The documents I have received, including a report written by Robert J. Spragg of Kreindler & Kreindler LLP, include interviews with an executive at TJX who states clearly that Ms. Barbuto was poised to make such advancements successfully.

Ms. Barbuto's salary at the time of her death was \$59,500, accompanied by a guaranteed 10 percent bonus. Given her demonstrated success with the company, it is very likely her earnings would have increased substantially as her tenure with TJX increased, and her bonus would have increased to be up to 40 percent of her salary. According to the executive mentioned above, Ms. Barbuto's total compensation would have exceeded \$500,000 annually if she had reached the position of Vice President, General Merchandise Manager, and judging by the language used by this executive, it is extremely likely she would have reached this position. Thus, I assume she would reach this position after 30 years with the company (25 years after the time of her death), and I assume her salary and bonus would increase each year to a) make her bonus be 40 percent of her salary, and b) her total compensation be \$500,000, at this time. This path requires her salary grow at an annual rate of 7.4%, and her bonus at a rate of 5.7%.

¹ National Vital Statistics Reports. United States Life Tables, 2002. Volume 53, No. 6, November 10, 2004.

4. Social Security

Ms. Barbuto would have received Social Security payments in retirement. I assume she would have received a monthly payment of \$1,341, which is the average monthly benefit among retired workers in 2016.²

5. Income Taxes

A portion of Ms. Barbuto's earnings would have been taxed at the federal and state level and for FICA. To estimate this tax liability, I use the TaxSim program, administered by the National Bureau of Economic Research (NBER).³

6. Personal Consumption and Health Care Expenditures

Ms. Barbuto would have used a portion of her earnings and benefits for personal consumption. To estimate the portion of her income that would have gone to personal consumption, I use the Patton-Nelson tables, a widely referenced source to estimate the necessary consumption allowance to determine the portion of post-tax income that is to be included as a loss to the estimate.⁴ The Patton-Nelson method estimates the percent of income allocated to consumption by income, gender, and household size.⁵

In addition, a portion of Ms. Barbuto's earnings would have gone to health care premiums. I have estimated the amount Ms. Barbuto would have paid to such premiums based on a 2012 report of health insurance premiums by state from 2003 to 2011.⁶ In 2003, the average single-person health care premium in Massachusetts was \$3,500/year, and the average employee cost share was 20.4 percent, and so I assume Ms. Barbuto paid ($3500 \times .204 =$) \$714 for health insurance at this time, and that this amount would increase by 5 percent each year thereafter.

² Source: Investopedia. <http://www.investopedia.com/ask/answers/102814/what-maximum-i-can-receive-my-social-security-retirement-benefit.asp>

³ TaxSim takes as inputs taxable income, marital status, age, dependents, among others, and outputs federal, state, and FICA tax liabilities. For simplicity I assume the filer filed as "Single."

⁴ Ruble, M.R., Patton, R.T. and Nelson, D.M., 2014. Patton-Nelson Personal Consumption Tables 2011-12. *J. Legal Econ.*, 21, p.41.

⁵ With respect to household size, while Ms. Barbuto was single at the time of her death, it is possible she would have lived in a larger household with dependents as she grew older. For the purposes of estimating her consumption percentage, I assume she would have lived in a 3-person household from age 35 to age 53, and a 2-person household thereafter.

⁶ The Commonwealth Fund. 2012. State Trends in Premiums and Deductibles, 2003-2011: Eroding Protection and Rising Costs Underscore Need for Action. http://www.commonwealthfund.org/~media/files/publications/issue-brief/2012/dec/premiums/1648_schoen_state_trends_premiums_deductibles_2003_2011_1210.pdf (accessed September 2016).

7. Lost Value of Household Services

Ms. Barbuto regularly provided babysitting services at least once a week for the children of her two sisters. Judging by the pictures in the report I received, these children were quite young at the time of Ms. Barbuto's death, so I assume she would have continued providing this service to her sisters for the next five years. This is a service her sisters would have to pay for after Ms. Barbuto's death, so I use the "Replacement Rate" method to calculate the value of these lost services. I assume this service was provided 8 hours per week, 50 weeks per year, and that someone would have to be paid \$15/hour to provide these services.

8. Discount Rates

An estimate of the present value of the loss to Ms. Barbuto's estate must discount future income streams at an appropriate rate. As such, I have discounted all income beyond 2016 at an annual rate of 2 percent.

Table 1: Summary of Economic Damages to the estate of Christine Barbuto

Present Value of Lost Earnings	4,181,678
Present value of Lost Social Security benefits	86,280
Present Value of Lost Household Services	30,000
Total	4,297,958

Table 3: Present Value of Lost Social Security Benefits

Year	Age	Social Security	Consumption	Net Loss	Present Value	Discount
2035	66	16092	7016	9076	6,230	19
2036	67	16092	7016	9076	6,108	20
2037	68	16092	7016	9076	5,988	21
2038	69	16092	7016	9076	5,871	22
2039	70	16092	7016	9076	5,756	23
2040	71	16092	7016	9076	5,643	24
2041	72	16092	7016	9076	5,532	25
2042	73	16092	7016	9076	5,424	26
2043	74	16092	7016	9076	5,317	27
2044	75	16092	7016	9076	5,213	28
2045	76	16092	7016	9076	5,111	29
2046	77	16092	7016	9076	5,011	30
2047	78	16092	7016	9076	4,912	31
2048	79	16092	7016	9076	4,816	32
2049	80	16092	7016	9076	4,722	33
2050	81	16092	7016	9076	4,629	34
Total					86280	

Table 4 - Loss to Estimated Value of Household Services

Year	Age	Hours Babysitting for sisters' children	Value of household service	Present Value	Discount
2002	33	400	6,000.00	6000	0
2003	34	400	6,000.00	6000	0
2004	35	400	6,000.00	6000	0
2005	36	400	6,000.00	6000	0
2006	37	400	6,000.00	6000	0
Total				30000	

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- Levine, David I., Michael W. Toffel, and Matthew S. Johnson. 2012. "Randomized Government Safety Inspections Reduce Worker Injuries with No Detectable Job Loss." *Science* 336, no. 6083.
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- 2013: Harvard School of Public Health ERC Seminar
- 2012: Association for Public Policy and Management Fall Research Conference, Baltimore MD

COMPUTER SKILLS: STATA, LaTeX, R

OTHER EXPERIENCE

- 2014-2015: BU Labor Reading Group founder/organizer; 2013-2014: BU Graduate Economics Association Officer; 2012-2015: Volunteer Tutor with Tutoring Plus! (2012-2015)

Bettina B. Browne-Radburn

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Analysis of Economic Loss in the Matter of
Estate of Bettina B. Browne-Radburn

September 2016

To Whom It May Concern,

I have been retained by Kreindler & Kreindler LLP to provide an estimate of the economic losses to the estate of Bettina Browne-Radburn following her death in the terrorist attacks of September 11, 2001. The attached report provides the details of my analysis.

I have attached my Curriculum Vitae that describes my qualifications to undertake this report.

Matthew S. Johnson

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1. Introduction

Bettina Browne-Radburn was born on August 23, 1952, and she was 49 years old when she was killed in the terrorist attacks of September 11, 2001. She was survived by her husband, Ed Radburn.

This report provides the details behind an estimate of the economic loss to the estate of Ms. Radburn as a result of her death.

2. Retirement and Life Expectancy

I have assumed Ms. Browne-Radburn would work until age 70, which is the age it is estimated she would have retired based on the documents I have been given. I assume she would live until age 80, the average life expectancy of a white female aged 50 as of 2002.¹

3. Earnings Loss

Ms. Browne-Radburn was an accomplished businesswoman. At the time of her death, Bettina Browne-Radburn was an Executive Vice President for Mergers and Acquisitions with Aon, a position she had begun in May 2001. Based on her experience, Ms. Browne-Radburn was extremely qualified for this position, so I assume she would have continued with Aon into retirement. Her starting salary was \$175,000 with a guaranteed bonus of \$50,000. In addition, she had worked out an arrangement to provide consulting services to Omni, a company she had previously founded, for which she would be paid \$175,000 annually.

I assume Ms. Browne-Radburn's earnings would have grown at a rate equal to the compound annual growth rate (CAGR) of her earnings over the 4 years prior to 2001. Based on her tax returns, Ms. Browne-Radburn's salary earnings increased between 1997 and 2000 at a CAGR of 4 percent. Thus, I have assumed her total earnings (Aon salary and bonus, and Omni consulting services) would have grown at an annual rate of 4 percent.

4. Retirement Benefits

Aon provided a generous pension, which Ms. Browne-Radburn would have become eligible for after a few years of service. While I did not receive information about Aon's

¹ National Vital Statistics Reports. United States Life Tables, 2002. Volume 53, No. 6, November 10, 2004.